

THE
BOSTON MEDICAL AND SURGICAL
JOURNAL.

VOL. XXV.

WEDNESDAY, DECEMBER 22, 1841.

No. 20.

DR. PAINE'S INTRODUCTORY LECTURE.

[Continued from page 303.]

It has ever happened, as an inevitable consequence of the fundamental alliance between healthy and morbid processes, that, whenever chemistry, or physics in a more general sense, has invaded organic nature, the philosophy of disease and of therapeutics has followed in abject submission. I cannot now conduct you through the astonishing details, which, taken one by one, would show you that organization—aye, that intellectual being whose divine portrait was so vividly drawn on Tuesday evening—is *practically* regarded, as it is *theoretically* pronounced, a mere chemical laboratory,* composed of tubes of various calibre, amenable to the laws of chemistry, which, it is imagined, may yet be imitated by the hand of man, and that with the aid of the vital properties in the elements of matter (and of course, by analogy, the soul also), whose primeval existence in this relation is maintained for contingent purposes, the confident hope is promulgated that the laboratory will yet be able to exert the highest Prerogative of Creative Power. Already, indeed, it has been given out, *ex cathedra*, that nothing is easier than the accomplishment of digestion by artificial mixtures, in the preparation of which, as I have said, the furnace is sometimes instrumental—that nothing is easier than the artificial fabrication of those organic compounds which are elaborated by an *unfathomable* organization that was designed for this specific purpose by the Divine Mind—but, *not* till the alimentary material has been vitally decomposed and its elements recombined in a mysterious manner by the gastric juice—then subjected to the farther organizing effects of the bile and other organic products—passed through the wonderfully vivifying lacteals—carried forward and subjected to the whole animating influence of the pulmonary system—perfected in its exalted endowments by the whole labyrinth of the circulatory organs—and lastly, though not least, determined from the blood in one everlastingly exact manner by other complex living systems—but *how*, no imagination can form the most remote conception, but through the instrumentality of those specific properties of life, which were the only power concerned from the beginning to the ending of the astonishing series of unvarying changes;—and, as might be inferred from the utterly groundless pretensions, aspirants have lately appeared with *animals*, composed of nerves, stomachs, respiratory organs, eyes, ears, *instinct*, &c.—both male and female, as on a former

* See Medical and Physiological Commentaries, Vol. I., p. 36.

occasion, and *now*, as *then*, made out of the elements of matter—though in the modern case, *galvanism* is the *creative spirit*. These offsprings of the ingenuity of man, it is true, after having been duly added to the trophies of chemical science, were ultimately suspected of having been the work of another Power, and even by those philosophers who emblazoned their scientific journals, in Europe and in America, with pictured illustrations of these supposed creations of the laboratory, and who once “*saw that it was good*.” But, I will not neglect saying, that the pretended creation, independently of the living organization, of any one real organic compound, however *simple*, is not less fallacious, and arrogant, and irreverent, than was the pretended creation of insects out of silex by the spirit of galvanism.

I shall not farther speak of the moral and religious tendencies of these speculative invasions upon nature. They must be sufficiently obvious to every reflecting mind; however they may be offensive to one, or admired by another. My present interest lies in their *philosophical* merit, and in their practical bearing upon health and disease. They are uprooting every intelligible principle which relates to the former, and are converting the latter into the confusion of chaos. The humoral pathology, especially, has ranged itself under the auspices of the all-potent science; and, although as wide spread as Christendom (if we except the common empiric who has never relinquished his hold upon the same doctrines as taught during the long decline of medicine in the dark ages), their modern ascendancy has been, as it were, the work of a day. Davy, having accomplished his wonderful discoveries in the mineral kingdom, the credulous, the zealous, or the ambitious, built upon these achievements a hope that something would turn up for the benefit of a favorite hypothesis in medicine, or something for the advancement of reputation. The world was crowded, beyond example, with *learned* men, and with an *interminable* audience—constituted morally and intellectually just as they were when Pope wrote his “*Essays on Man*” and the “*Temple of Fame*,” and that other delineation of men and manners, which is called the “*Dunciad*.”

After a long and laborious investigation, however, of the imputed connections of chemistry with organic philosophy, I have seen no reason to qualify the declaration which I have more publicly made, that I know of *no solitary fact* contributed by chemistry, which has thrown a ray of light upon the philosophy of life or the arcana of disease; and, as concurring in this sentiment I have been most happy to refer to the opinion of my learned associate who presides in the inorganic kingdom, and who so justly surrenders to the physiologist an interpretation of the living department of nature. We may therefore hope for an enlightened co-operation from this philosopher, in my efforts to place you on the right road of inquiry, should he think it sometimes expedient to travel out of his inorganic dominions to regale himself at the *fountain of life*. I shall therefore have less hesitation in speaking of the illusory and *seductive* nature of the *experiments* in organic chemistry, and more especially of their application to the *laws* of organic beings—so seductive, indeed, that they beguile our senses, and cheat us of our understandings. You must look

upon all these doings as upon the arts of legerdemain—apparently real, but most grossly deficient in their pretended elements. Notwithstanding the recent triumphs of chemistry in the inorganic kingdom, and the vast multiplication of its powerful resources, it has left the whole science of life and disease just where it abandoned them when it was in a comparative infancy—or, with only the difference in the relative amount of error, and the exertions which are now necessary to its exposure and defeat.

But, of this subject I shall speak more fully hereafter, and shall only now add for the purpose of securing your attention to the important questions before us, that the farther chemistry pushes its investigations, the more it multiplies proofs that the whole subject of life and disease belongs to another department of philosophy. We find, indeed, that chemistry is everywhere against the hypotheses which have been founded upon its own principles; and, in this negative sense, it will have *greatly* contributed to the science of life. All that is now necessary to obtain the full benefit of the light which has been thus reflected, is the permission of chemists that it shall take its natural direction. But, it has been said with a justice applicable to all ages, that “every new system of philosophy, true or false, must be embraced and introduced into medical science.” Asclepiades explained all by the Epicurean or corpuscularian philosophy; Galen and his disciples by the philosophy of Aristotle; another eminent sect by the mechanical philosophy of Newton, who, says Bryon Robinson, “discovered the cause of muscular motion and secretion, and furnished materials for explaining digestion, nutrition, and respiration”—whilst Sir Humphrey Davy and numerous followers also think it “possible that one law alone (of a chemical nature) may govern and act upon all matter; a law,” continues the great chemist, “which might be called the law of animation.” Hence, it was well said by Bichat, that “chemists and mechanical philosophers, accustomed to study the phenomena over which the physical forces preside, have carried their spirit of calculation into the theories of the vital laws.” The principle is well exemplified by the metaphysician, Dr. Reid, who says that “Mr. Locke mentions an eminent musician, who believed that God created the world in six days, and rested on the seventh, because there are but seven notes in music. I myself,” the Doctor continues, “knew one of that profession who thought that there could be only three parts of harmony, because there are but three Persons in the Trinity. A chemist imagined that he had the felicity of having discovered a principle (not that of Newton’s or Davy’s), which would expound all the phenomena of organic beings. The physiologist, after listening to his philosophy, told him that there was but one circumstance adverse to his discovery, which was, that the physiological facts were all exactly the opposite of what he had supposed. The chemist then begged the physiologist to state what the facts were, that he might *explain* them by *his* system. And, to the same effect we have the opinion of Lord Bacon, who says of Cicero, that “he went about to prove the sect of *Academicks* to be the *best*; for, saith he, ask a *Stoic* which philosophy is true, he will prefer his own. Then ask him, which approacheth *next* the truth, he will *confess* the *Academicks*. So deal with the *Epicure*, that will scarce endure the

Stoic to be in sight of him ; so soon as he hath placed himself, he will place the Academicks next him." The reasoning of Cicero is as good for the physiologist as for the Academicks—for so soon as the iatro-chemical or the iatro-mechanical philosophers have placed themselves, each, and all other sects who build up a spurious philosophy of life, will place the physiologist next.

The metaphysician, Brown, admonishes us emphatically against the propensity of carrying the theories relating to favorite pursuits into other sciences. And thus, Lord Bolingbroke, as if in rebuke of Reid, and Locke, and Brown :—

"Metaphysical writers," he says, "counsel us sometimes very gravely to silence imagination, that we may attend to experience, and hearken to the voice of reason. The advice is good, and they would neither puzzle themselves, nor perplex knowledge, if they took it as they give it."

This is the evil ; and as well said by Mr. Lawrence, "what we are to guard against in our professional researches and studies, is the influence of partial and confined views, and those favorite notions and speculations which, like colored glass, distort all things seen through their medium." We must build upon *facts*, and *facts alone*. Nor is this *all* that is necessary. We must have the *last* as well as the first in the series ; for the *last* fact may be necessary to determine the proper application of the whole, and establish a sound generalization, or *theory* as it is called. *Hypothesis*, on the contrary, rests upon a *partial* array of facts ; and this is the reason that, whatever is hypothetical grasps at a thousand shadows, and perverts a thousand realities. But, in no inquiries is the mind so apt to go astray, and to carry its hypothetical conclusions into other departments of nature, as in the science of chemistry. Here, everything seems demonstrative, and yet everything may be essentially deceptive. The enlightened chemist will confess you this ; and whilst he fears that the fabric of inorganic chemistry may be overthrown, he hopes to be more permanently associated with organic nature. That he is right in his fears, every day is supplying proof upon proof. Sometimes the proof is positive, sometimes negative ; and of the latter we have just had a remarkable exemplification in the proclamation by the celebrated Professor Christison, that he had converted the compound substance known as cyanogen, and renowned for the mischief it has done in organic philosophy, into the simple element called silicium, and which is not only a simple substance, but utterly different from either of the elements of cyanogen. This is only an exemplification of the bold positions which are now rapidly taken by chemical philosophers ; and, had it turned out as represented by the professor, it would have struck a fatal blow at every principle in chemical science. Indeed, upon the strength of this supposed metamorphosis of nature, a learned friend told me that it was not improbable that the halcyon days of alchemy were about to be realized in a substantial manner, and that we should soon have our furnaces for the transmutation of iron into gold, and the famous "tincture of all-flowers" into the never-failing "elixir of life."

It therefore ceases to be remarkable, that chemistry should have pushed for laurels far into the labyrinth of organic life. The perpetual blast of

the furnace, however—the frequent jeopardy of life and limb from explosive mixtures, and the pursuit of other devices *by day* and *by night*, to turn the whole organic kingdom into the laboratory, can leave no doubt that what may have been originally the prompting of ambition grows into enthusiastic delusion. We see, therefore, the puzzle of the philosopher who “observed to Crito how unaccountable it was, that men, so easy to confute, should yet be so difficult to convince. Make a point never so clear, it is great odds that a man, whose habits and the bent of whose mind lie in a contrary way, shall be unable to comprehend it.” Nevertheless, “we have among us moles that dig deep under ground, and eagles that soar out of sight. We can act all parts, and become all opinions; putting them on or off with great freedom of wit and humor.”

But, is there no *fundamental* guide which may enable the inquirer after truth to perceive, at the glance of an eye, the wide gulf which separates chemistry from physiology? A gulf so vast should be everywhere studied with insignia in all its surrounding outskirts. I have already told you of many; but I will now show you the *gulf itself*.

Inorganic nature is *at rest*. Its great characteristic is *vis inertiae*. Here, then, are no phenomena to denote the forces and laws by which its internal constitution is governed. But, it so happens that chemistry may set its forces in motion, overthrow its composition, examine its elements, and elicit a train of phenomena which declare its fundamental laws and forces. These, therefore, are proper and necessary experiments, since they are concerned with the forces of nature, and are the only mode by which we can reach their phenomena.

Let us now turn to the other side, and see how it is with *organic* nature. In all things *exactly* the reverse. Here, everything is in *motion*—in *creative* motion. Its powers and laws are open to the observation of all, through their perpetual and endless phenomena—and to which there is nothing remotely analogous in those results which are obtained by the chemist when he sets in motion the forces of the inorganic world.

In the laboratory, then, we have experiments upon nature in her state of *torpidity*. In the organic body we have the experiments of *nature herself*. Consider, too, that in the former case, they are meagre, uncertain, and at the mercy of every breeze. In the latter—in the individuals of every species, they are inexhaustible in variety, and in all the hundreds of thousands of species varied according to the varieties of organization—but all concurring to demonstrate a near identity of forces and laws; and coming *directly from* nature, they *cannot deceive*. Will you, therefore, prefer the experiments of man upon organic nature when deprived of its peculiar properties and laws, and subjected to forces unknown to the organic being—and worse than all, when that being is broken up in its very structure and elements? Do you not see the absurdity of such distortions of nature? Are you not rather contented with *her own* endless experiments—so endless that you may unceasingly study them for the span of your life, and yet you shall have only *entered* upon their variety. What other experiments can we require than such as are thus perpetually presented by the organic being—varied as the species, varied as every moment, varied as disease from health, and the phenomena always true

to the fundamental laws? Or, if something may be yet *artificially* elicited, should it not be done through the *living* organization, that its *own* appropriate forces and laws may have *their* share in the extorted results? Do you not instinctively answer, yes? I was *certain* that you would, and have so written it down.

Here I had intended to have made a hiatus in my discourse; but the patience with which you have listened encourages me to persevere to the last. I have been admonished by kind friends, within and without the profession, that a doctor's discourse should never trespass beyond the good old limit of an hour; and this being my first address to a public audience, I had almost determined to surrender my wonted habits of thinking for myself. But it certainly appears to be an established rule, that a professor of medicine can hazard only an hour—whilst the more bountiful allotment of two hours is assigned to the parson (when he chooses to take it), six hours to the lawyer, and from twelve to forty-eight hours to a member of Congress. Whilst each keeps himself within the limits, respectively, the rule is—never to *leave the room*, nor to *snore aloud*. For myself, I shall only ask for the benefit of clergy.

I will now cursorily glance at some other mischievous consequences which have resulted from the restoration of the physical doctrines of life. One of the most important, and most productive of evil, is the prevailing hypothesis which assigns, as the cause of inflammation, a stagnation or interruption of the circulation of blood in the small vessels, which carry on the processes of disease; and this doctrine is now extended by distinguished writers even to idiopathic fever. It takes away all agency from the vital properties, all function from the instruments of disease, and resolves all the remarkable, unique, and diversified phenomena of those two great classes of disease, which swallow up all the important human maladies, upon purely physical principles; as physical and as lifeless as if the being were positively dead. The hypothesis, therefore, offers no light to the practitioner, nothing to guide his hand, no cheering consciousness that he strives with a disease which the *mechanic* could not as well control. But, we shall find, gentlemen, that it is all exactly otherwise, and that these diseases which make up the great amount of human suffering, and form the principal outlet of life, are under the same great laws which determine all *healthy* processes—only, however, partially modified by certain primary alterations of the properties of life. Were the mechanical doctrine true, of what use to us would be our knowledge of physiology? Where would be its application to disease? It would have no remote bearing upon the subject, and the whole scheme of pathology could be written out upon a quarto page. But, the vital properties, in inflammation and fever, so far from being paralyzed, as it is called, are exalted in power, altered from their natural state, and are the fundamental cause of all the phenomena that are seen or felt. The blood is neither stagnant nor coagulate; but moves in the instruments of disease with increased velocity, and in an augmented quantity. With *these* facts before us, there is something for *philosophy* to contemplate, something consonant with the laws of life, and something to encourage the practitioner in a rational treatment and with the hope of success.

Are you anxious to know the origin of a doctrine so derogatory to philosophy, so contradictory of fact, so subversive of all rational principles in medicine? I will tell you, then. Like all our other prevailing physical hypotheses, the mechanical doctrine of inflammation is only the ghost of darker ages—shorn, however, of what was originally considered its animating and indispensable attribute. It was the conception of one Vacca, an Italian physician of vivid imagination, who never *pretended* that it rested on a *solitary* fact. It was considered, indeed, so utterly baseless, that Hunter does not refer to its existence. But, what was thus *originally* the project of imagination, *now* professes to rest upon *experiment*. It is also a curious coincidence, that all the exploded doctrines of antiquity which have been recently brought forward to decorate an age which *boasts* of its *originality*, never were advanced under even the *pretended* auspices of fact. But, as I have already said, the most remarkable appendage to Vacca's hypothesis, and which the inventor considered indispensable, is studiously kept out of sight.

Vacca maintained a debility of the bloodvessels, in consequence of which they were said to lose their power of propelling the blood, and, as another consequence, the blood is supposed to stagnate and coagulate within them. So far his followers. But here *their* pathology stops; and as to their principles of cure, they are of course as mechanical as the pathology. But, a great majority do not even allow of independent action to the bloodvessels, in their *natural* state, but refer the whole movement of the blood to the propelling power of the heart, and perhaps, also, to hydraulic pressure. They only recognize, therefore, in inflammation, a mere physical relaxation of the coats of the vessels—just as leather is relaxed by soaking in water, and probably much in the same way. Their diameters being thus enlarged, the current of blood is said to stagnate like water in the wide channels of muddy and shallow rivers—this being, *verbatim*, their philosophical comparison.

Vacca, however, had the sagacity to perceive that mere passive relaxation of the vessels, and stagnation of blood, would never explain the exalted temperature of the part inflamed, and its various other morbid phenomena. He therefore boldly assumed that a real combustion, an absolute fire takes place in the blood as a consequence of its stagnation in the vessels; nor have we any other ground for this opinion, than that *inflammation* signifies *a fire*. There are, he says, four principal fluids in the body; namely, the blood, the serum, the fat, and the nervous fluid. The serum, he says, is too watery to burn, but the blood burns tolerably well, and the fat burns after its well-known manner. This, you will also probably surmise, is the origin of our doctrine of spontaneous human combustion—which is one of the present embellishments of physiology. The nervous fluid is said by Vacca to be so volatile that it escapes the conflagration; and it is left *undecided* whether it be combustible or not. It therefore remains a *fair* subject for experimental inquiry; and it is difficult to divine why it has been so utterly neglected by the chemist. It is also a fundamental principle with our projector of the now prevailing doctrine, that no inflammation can take place without the *presence* of atmospheric air to *ignite* the contents of the bloodvessels. The antec-

dent stagnation, he maintains, lets in the atmosphere, which draws the inflammable parts into the vessels, and there ignites them. The tumefaction of the part is said to be considerably owing to an evolution of gas generated by the process of combustion, and this swelling gives room to a farther ingress of combustible matter.

Vacca affirms that these are *essential requisites*, and that without them there can be no inflammation. He published this nonsense in 1765, in a work entitled "*De Inflammationis morbosæ Natura, Causis,*" etc., and its mechanical part is the now prevailing doctrine of inflammation; whilst one of its *vital* consequences, pus, is considered, as it anciently was, a mere chemical decomposition of the tissues inflamed.

Why is this doctrine so extensively embraced? Because it is captivating, like Brown's and Broussais's theories of disease, by a simplicity which exempts the mind from any laborious reflection, either as to the remote causes, the pathology, its contingent influences, or the mode of treatment. But, with Vacca's embellishment, there was a factitious analogy with the immense latitude over which the science of disease naturally stretches. There was at least abundant room for the riot of imagination, and something to give a show of plausibility to the stunted *mechanical* part of the hypothesis. Living Nature, gentlemen, is full of poetry, and man gets *all* his best poetry from her—just as the physiologist obtains from her all his doctrines of life and disease. But, as there is a poetry of the imagination as well as of nature, so, also, are there *imaginary* as well as *real* physiological doctrines. Those which are *real* are the natural *poetry*, as well as the *basis* of medicine—and they shrink, *instinctively* as it were, from all physical and mathematical calculations.

There is *another* wide spread and fatal disease, which I regard as inflammatory, and upon the philosophy of which I shall have something to say hereafter. It has attracted but little attention either in respect to its pathology, or treatment, but which, perhaps more than any acknowledged inflammatory affection, is supposed to be under the dominion of physical laws. This disease is *Venous Congestion*; appearing under simple forms, or complicated with idiopathic fever. In the former case, it exists as an independent affection of the veins, but constantly liable to involve other tissues, or the whole system, in sympathetic influences. When connected with *idiopathic fever*, it still maintains the character of a local and distinct disease. The two, co-existing, mutually influence and exasperate each other, just as do local inflammations of other tissues and idiopathic fever, when they co-exist.

In respect to Venous Congestion, it is remarkable that even during the ascendancy of *vitalism*, or when pathology was generally considered in its true relations to nature—it is remarkable, I say, that even then, venous congestion was regarded in a mechanical sense. It was then, as now, supposed to depend upon some obstruction to the venous current, and a consequent stagnation of blood in the congested veins. Since the general revival of the physical doctrines of life, this disease has attracted more attention, and has been more extensively expounded upon mechanical principles. The vital properties and vital actions have been universally excluded as elements in its pathology; and it has served as a *re-*

cruiting force to the analogous pathology of inflammation. Remedial agents have been therefore applied upon physical principles, and their effects, if salutary at all, are construed in conformity with the same philosophy.

Considering, then, that inflammation, fever, and venous congestion, comprise most of the maladies we are required to treat, it may be safely said of medical science, that "there is nothing stirring but stagnation."

Nevertheless, I shall ultimately show that congestion of the veins, like all other diseases, falls under the common law of dependence upon an altered state of the vital properties of the venous parietes—that there is no obstruction, no stagnation of blood in the case, but that it flows in the congested veins as freely as in health. The philosophy of this disease is of vast magnitude, since it is scarcely less prevalent than the common forms of inflammation, whilst it is more complex in its influences upon the system at large, of far more difficult treatment, and much more fatal. It forms the predominant feature in the yellow fever, and in the congestive fevers of this climate, and throughout the southern and western States. It is the great source of their obstinacy, and the main cause of their fatality.

You hear much, gentlemen, of the great advances of medicine in recent times. And so it has advanced; but only so in the accumulation of facts. There is scarcely one physiological, or pathological, or therapeutical doctrine now advocated by the "*reformers*," as they call themselves, which was not more or less in vogue at degenerate ages of our science. Whether they be anatomical, chemical, or mechanical, they have all had their day, and have all been exploded as utterly contradicted by the phenomena of life and disease, and by all that is known of organic philosophy. And this I say, as due to the great cause of which I am an humble advocate.

It is not here, however, on American soil, that those seeds of darkness have taken root. With a few rare exceptions, our own medical philosophers have gone on cultivating philosophy. You will not soon forget that spirit-stirring reference, which was made by our professor of surgery, to the revolution of empires—and upon which, as I imagine, as well as upon the facts which I have myself announced, he founded his conclusion, that the city of New York may yet be destined to supply Europe with her medical philosophers; and that, too, not unlikely, within a century hence.

[To be concluded next week.]

MEDICAL TOPOGRAPHY AND STATISTICS.

To the Editor of the Boston Medical and Surgical Journal.

SIR,—The following article is taken from a communication made to the Litchfield County Medical Society at its last annual meeting. You will please dispose of it in any way you may think proper. Yours, &c.

Goshen, Ct., Dec. 10, 1841.

SAMUEL W. GOLD.

One of the distinguishing features of medical knowledge, at the pre-

sent day, is the multiplied facilities for obtaining facts from a much wider field than formerly. The whole world is rapidly opening its stores to the view of scientific research, and the medical man can now refresh his mind amidst a multiplicity of journals rich with cases and various useful facts gathered from the widely extended parts of our own and other countries. Amidst this broad accession of useful knowledge, few subjects have afforded more benefit to the profession than those facts which belong to the department of medical topography. A knowledge of atmospheric changes, in respect to temperature and humidity, poisonous effluvia, the elevation; density of population, habits and employments of the inhabitants of any given section of country; also the diseases and annual per cent. of deaths, are all indispensable to an intelligent understanding of our profession.

In connection with these remarks, gentlemen, permit me to communicate some medical statistics relative to the town where I at present reside.

Goshen, situated near the centre of Litchfield county, is an elevated table land. Its general elevation is about 1000 feet above tide water. The town is 9 miles long from north to south, and about 6 broad from east to west. The surface is rolling, with swells generally of moderate elevation. Probably about one sixth of the surface is covered with forest trees. The soil is argillaceous, and is abundantly supplied with water. There are five lakes in this town, of from one to three miles in circumference. The water in these reservoirs, and the streams issuing from them, is usually clear and soft, containing but little clayey impregnation. There are numerous permanent springs, which afford soft and very agreeable water. Most of the wells exhibit more or less argillaceous influence from the soil. There are several sections of the town, most commonly in the vicinity of the lakes, where a considerable quantity of peaty formation exists. May it not be owing in part to *this fact*, although principally to the elevated position, that notwithstanding the large proportion of water nearly in a state of repose, marsh miasmata is rarely generated here? I have been able to ascertain but three cases of intermittent fever, which were supposed ever to have originated in this town; and those occurred during its early settlement. Since my residence here I have met with several cases of this disease; but it was obvious that in every instance it originated from abroad, where the patient had been residing just previous to the attack.

The whole number of deaths in Goshen during a period of twenty years, from 1804 to 1824, was 274. The population of the town in 1820 was nearly the same as at the present time, being then 1586, making an average number of $13\frac{2}{3}$ deaths in each year for that period. This is, *yearly, one in one hundred and thirteen*; being a smaller proportion of mortality than I recollect to have seen stated from any other part of this country. The greatest number of deaths that occurred in any one year of the before-named period, was 22; and the least, 9. The number who died during each month is as follows, viz.:—January, 22; February, 21; March, 31; April, 30; May, 16; June, 21; July, 26; August, 17; September, 21; October, 23; November, 18; December, 28. The greatest mortality being in March, and the least in May.

Of the 274 deaths, there were under 1 year, 29; from 1 to 10, 54; 10 to 20, 27; 20 to 30, 26; 30 to 40, 20; 40 to 50, 11; 50 to 60, 14; 60 to 70, 17; 70 to 80, 43; 80 to 90, 28; 90 to 100, 5.

The causes of death, as far as ascertained, were the following, viz.:—Old age, 41; consumption, 35; fevers, 32; fits, embracing apoplexy, palsy, &c., 29; hydrocephalus, and various other kinds of dropsy, 17; pneumonia, 14; other inflammations, 9; croup, 8; whooping cough, 5; accidental deaths, 13, 5 of which were from drowning, 1 from freezing, and 3 from burns; child-bed, 4; cancer, 3; intemperance, 2; rheumatism, 1; liver affection, 2; diabetes, 2; dysentery, 2; poisoning by laudanum, 1; hemorrhage, 1; bilious colic, 1; mesenteric obstructions and marasmus, 8; worms, 1; suicide by hanging, 1; complaints not ascertained, 40. Stillborn cases are not included in the above list; but were they added, the average yearly mortality would still be, probably, less than 1 per cent.

The most extreme case of longevity which has ever occurred in the town, was one of 115 years. One died during the last year in the one hundredth year. Both of these were females; the oldest, a native of Africa. The whole number of deaths during the last year, ending 1st January, 1841, was 8; being a trifle more than one half per cent.

The thermometer usually ranges through the year from 3 or 4 below to 90 degrees above zero. The lowest it has fallen at the place of my residence, at any time during the last 18 years, was 14 degrees below, and the highest in the shade was 96 above zero. A comparison of the temperature here, with localities occupying much lower positions in about the same latitude, shows the thermometer considerably less depressed, during the coldest parts of the year, in the former than in the latter places. During the winter of 1840, the thermometer on the coldest day was but 13 degrees below, while at Woolcotville, distant six miles, and probably some five or six hundred feet lower, the mercury fell to 30 below zero; being 17 degrees colder than in Goshen. Frost, frequently, does not appear in autumn as soon by several weeks as in low situations. The atmosphere has a less chilling influence during the vernal and autumnal parts of the year, and the temperature is less extreme in its changes from day to night, than in the neighboring valleys. These circumstances, no doubt, have a favorable influence on the health of the inhabitants.

The inhabitants are mostly engaged in agricultural pursuits. They are, as a people, industrious, thriving and contented; the pure and elastic atmosphere in which they live, contributing much to keep up a high degree of nervous energy, thereby awakening a spirit for action and enterprise, for which, as a community, they are so highly distinguished.

BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, DECEMBER 22, 1841.

DR. DUNGLISON'S INTRODUCTORY LECTURE.

An introductory discourse delivered by Dr. Dunglison, at the commencement of the present term of the Jefferson Medical College, having been published by a committee of the class, we are provided with a copy, for which we return thanks to the gentleman who sent it.

Dr. Dunglison has written so much, and deservedly enjoys so good a reputation with the reading part of the profession, that we hardly know which of his labors to refer to as being superior to the others.

It is very well understood, in the ordinary mode of doing business, that an introductory lecture before a medical school at the beginning of a term, is nothing more nor less than a pleasant method of organizing for the season—and these discourses were accordingly formerly considered as being made to last but a single hour, and therefore it was of very little consequence whether they were simple or profound, since they were rarely seen or heard of after the occasion which called them forth had passed away. But the character of the times has essentially changed, with the multiplication of schools, and the increase and rivalry of learned and ambitious faculties. These introductions are now looked upon with an uncommon degree of interest, as an index of the minds of the men who give them; and each one is also, to a degree, a schedule of the proposed plan of operation and the policy of the institution, accompanied by the mature thoughts of a person prominent in society, whose professional influence and experience enable him to speak with authority to those who are just entering upon the responsibilities connected with the practice of medicine. In short, these annual introductory discourses, in the medical colleges of the United States, constitute, to a good degree, the medical literature of the country. They are now altogether our finest specimens of medical writing, and will compare with those from elevated sources, in any part of Europe.

We cannot very well dissect out of this, or any other introductory of the season, several of which are before us, particular pages, as strikingly beautiful or original, beyond anything that has gone before them. They are all good, as a series, and those who are careful to preserve them, will have a treasure that posterity will value exceedingly. In this lecture, the professor gives a succinct history of the past, and speaks encouragingly of events which are to come. He writes with facility, and always in a style that is both pleasing and instructive.

Raymond's Fracture Apparatus.—Some months since, mention was made in this Journal of an invention of an ingenious apparatus for the management of fractures of the lower extremities, which was manufactured by Mr. N. S. Raymond, of Utica, N. Y., and which seemed to recommend itself to the special notice of surgeons. Some who examined it, suggested that it was not strong enough to support the limb and keep the fractured extremities of a bone in place, should the patient, in some un-

guarded moment, happen to attempt a change in the position of his body. On being informed of this, Mr. Raymond at once obviated that apprehended defect, by giving greater size to the various parallel splints, and greater thickness to the semicircular iron bands, to which the bars are riveted. The screws, straps, &c., were also made a few sizes larger, and thus he completely obviated any objections that might be made on that score. A specimen with these improvements has been forwarded, and appears entirely unobjectionable.

We have not ascertained whether the first one brought to this city, and which was immediately placed in the hands of the surgeon of a neighboring hospital, has yet been used. We hope soon, however, to hear that it has, and that we shall be furnished with the results, accompanied by such observations as would naturally be made by a discreet operator, desirous of availing himself of all the improvements of the age, in this department of his art. Having been impressed, on the first examination, with a conviction that the true principle of counter-extension was developed in Mr. Raymond's contrivance, we are desirous that those who have opportunity, make a fair trial with it. The surgeons in Oneida county, certainly, ought to look to the matter at once, since they have a ready access to the manufacturer. No agent has yet been appointed in New England; hence we must look to the surgeons of western New York for the regular series of reports—for such would influence those most likely to manifest interest in the invention. Gentlemen in this part of the country can examine the one lodged at this office—and should any one express a wish to use it in any case that may fall under his care, by sending a proper reference, it is at his service for any reasonable period.

Evidence of the Re-union of Broken Bones.—In the New-York Medical Gazette, there is a curious statement in regard to a method of ascertaining the progress of the re-union in fractured bones, which we do not recollect of having elsewhere seen. If subsequent observation proves the assertion of Dr. Lesler, the reputed discoverer, to be true, the importance of the fact can hardly be estimated by surgeons. The matter is substantially this, viz. : that nails on the fingers and toes do not grow, while the fracture is in the process of being healed. Nothing can be easier than to ascertain whether this happens or not, in any hospital, and that, too, within a few weeks. The editor very naturally asks the following question—"Does this arrest of growth depend merely on the fracture of the limb, or is it, as the editor of the Brit. and Foreign Med. Review suggests, but indirectly connected with the fracture, depending on the well-known principle, that the growth of the various horny tissues depends on the amount of waste to which they are exposed?" Should any of our correspondents be possessed of knowledge upon this subject, or, by a series of inquiries which they may be induced to institute, convince themselves that such a law of the animal economy does really exist, they would confer a peculiar favor by communicating the result of their observations to the medical public.

The Construction of Prescriptions.—Modern practitioners make themselves merry over the elaborate prescriptions of physicians of the last and preceding centuries. Forty or fifty articles were apparently selected with great care, and with reference, many times, to the aspect of the planets,

especially the moon. To have had the necessary qualifications for prescribing in the sick chamber, in those ages, presupposes a life of incessant and accurate study. But another hundred years will so change the respectability of our present medical prescriptions, that many of them will doubtless be choicely preserved in glass cases, to exhibit the blindness, if not ignorance, of practitioners in the polished era of 1841. Our prescriptions are certainly again becoming rather complicated. It is true, that they do not invariably contain twenty different medicinal articles, to be mixed and swallowed at once, but some of them embrace a startling number of ingredients. Does not this require looking after by reflecting, philosophical physicians? The tendency seems to be to run into an unnecessary farrago of drugs, which are quite likely to neutralize each other.

Diseases of the Lungs.—Persons suffering from any form of disease of the lungs, especially those who do not feel able to pay a physician, may always receive advice gratuitously, at the Boston Institution, expressly designed for such, whether from the country or residing in the city. A generous part of the system consists in giving medicines also. Many have resorted there under the impression that their lungs were extensively, if not irrecoverably, affected, and perhaps ascertained that the seat of the malady was in some other organ. Minute stethoscopic examinations, together with a constant study of the condition of the chest, in sickness and health, give the physicians of the Lung Infirmary great facility in ascertaining the exact state of things—which is always of consequence to the applicant. While the medical class remain in the city, an occasional visit to this Infirmary would very much conduce to their benefit.

Dr. Haynes's Utero-abdominal Supporters.—These instruments appear to maintain the reputation which they acquired soon after their introduction to public notice, notwithstanding the number of others in the market. We have heard of cases where they have been used to advantage as umbilical trusses. Large numbers of them are sold for the relief of the various conditions of the abdomen and uterus to which they are adapted. A lot of them, of superior workmanship, have lately been received at this office, where may also be found various other kinds of the same instrument.

Carbonate of Iron.—The protection of carbonate of iron from decomposition, by means of honey (mixed therewith to form pills), depends on the property possessed by saccharine substances of preventing oxidation. The *pil. ferri comp.* of the London Pharmacopœia is prepared with treacle, in conformity with this theory; which circumstance ought to be generally understood, as a departure from the strict letter of the instructions would, in this instance, materially alter the result. The saccharine carbonate of iron was introduced into the Edinburgh Pharmacopœia on the same principle. The difficulty of preserving carbonate of iron unchanged, has always been in some degree an obstacle to its employment as a medicine. The *mistura ferri comp.* of the London Pharmacopœia, although an agreeable and valuable preparation when fresh made, becomes decomposed in the course of a few days, and its usefulness is therefore limited. Mr. Redwood has contrived a method of exhibiting pure carbonate of iron,

which is particularly deserving of attention. As soon as it is prepared, he encloses it in capsules of gelatine; which, by excluding the atmosphere, protect it from decomposition, and preserve it in a convenient form for administration for an indefinite period. The capsules contain ten or fifteen grains, which is quite sufficient for a dose in ordinary cases.—*Pharmaceutical Transactions.*

Medical Miscellany.—Smallpox has appeared at Mecklinburgh Co., Va. in a formidable manner—having already carried off many persons.—M. Petrequin, it appears, in a case of partially opaque cornea, the opacity being on the inferior two thirds, cut the superior rectus so as to produce an artificial squint downwards, and thus brought the transparent part of the cornea in relation with the horizontal rays of light.—Dr. Alban Smith, of New York, has opened an institution for the treatment of calculous affections and other diseases of the urinary organs. He was formerly professor of surgery in the College of Physicians and Surgeons, in that city.—There are two hundred and forty students, it is said, in the University Medical School in New York.—At Williams College the President has obtained one of Auzoux's manikins, for teaching elementary anatomy, which is studied in the senior year at that thriving Institution.—Besides the Bloomingdale Orthopedic Infirmary, managed by Dr. Mott, exclusively, Drs. Dorr and Brewster have another, which appears to be well esteemed, and therefore, it is presumed, is well sustained.—Word comes that a new medical journal, under the immediate patronage, and conducted by the professors of the new University Medical School, in New York, will appear about the first of January.—A new apparatus for amputation has been devised, which takes off a limb in "*ten seconds*," says a correspondent, and is favorably spoken of by Dr. Mower, of the U. S. Army, and other eminent surgeons who have seen it. Some particulars in regard to the invention are expected for publication.—The boldness and ingenuity of the venders of patent medicines in this and other cities, is very striking. One of them states that our pleasant neighbor, Dr. Bartlett, restored a female, who was badly used last week by burglars, to sensibility, by *Sherman's lozenges*, and dressed her wounds with the *poor man's plaster*!

TO CORRESPONDENTS.—Dr. Dixon's Case of Operation for Cleft Palate will be inserted next week.

Number of deaths in Boston for the week ending Dec. 18, 35.—Males, 19; Females, 16.

Of consumption, 7—suicide, 1—scarlet fever, 9—brain fever, 1—scrofula, 1—infantile, 2—lead poison, 1—debility, 1—apoplexy, 2—lung fever, 3—inflammation of the bowels, 1—croup, 2—intemperance, 1—accidental, 1—dropy on the brain, 1—disease of the heart, 1.

UTERO-ABDOMINAL SUPPORTER.

THE subscriber having moved from No. 16 Howard street to No. 3 Winter street, would inform medical gentlemen that he still continues to manufacture his improved "*CHAPIN'S Abdominal Supporter*," and they can be furnished with this instrument (which has been found so useful in cases of prolapsus uteri, abdominal and dorsal weaknesses, as well as in cases of prolapsus ani), from \$2.50 to \$7.00, according to the finish. Perineum straps (extra) at 75 cts. to \$1.00. The measure of the patients to be taken around the pelvis in inches.

Reference may be had to the following physicians in Boston, among others, who recommend this instrument:—Drs. John C. Warren, J. Randall, W. Channing, Geo. Hayward, J. Ware, E. Reynolds, Jr., J. Jeffries, G. B. Doane, J. V. C. Smith, W. Lewis, Jr., J. Homans, J. Mason Warren, &c.

The supporter, with printed instructions for applying the same, will be furnished and exchanged until suitably fitted, by application personally, or by letter, to A. F. BARTLETT,

No. 3 Winter, corner of Washington st., Boston.

The above may also be obtained of Messrs. James Green & Co., Worcester; G. H. Carleton & Co., Lowell; Joshua Durgin & Co., Portland, Me.

INSTRUMENTS.

THEODORE METCALF, Apothecary, No. 33 Tremont Row, offers to surgeons and dentists, the best selected assortment of Instruments to be found in the city: consisting in part of Amputating, Trepanning, Obstetrical, Dissecting, Strabismus, Pocket, Eye and Cooper's Cases; Scarificators, Catheters, Bougies, Stomach Pumps, Injecting do., Spring and Thumb Lancets, Dissecting and Dressing Scissors, Trocars, Needles, Bistouries; Dressing, Dissecting, Polypus and Throat Forceps, Tonsil Instruments, &c. &c. of American and English manufacture.

Extracting Forceps, in sets of 12, or singly, of superior form and finish; Excavators, Burrs, Pluggers, Drills, Files; Cutting, Splitting and Punching Forceps; Gold and Platina Plate and Wire, Solder and Springs, Gold and Tin Foil, MINERAL TEETH, in great variety (much the largest assortment to be found in N. England), Grindstones, and almost every article used in the surgical or mechanical departments of Dentistry.

All orders from the country carefully and promptly executed.

D. 1.—6m

MEDICAL INSTRUCTION.

THE undersigned have united for the purpose of receiving students in medicine and affording them complete professional education. The following are some of the advantages which are offered.

Students will be admitted to the medical and surgical practice of the Massachusetts General Hospital, and to the Infirmary for Diseases of the Lungs. At the Hospital, Dr. Bowditch will deliver a course of clinical lectures; and there, but more particularly at the Infirmary, the students will be practised in the physical examination of pulmonary diseases.

Occasional opportunities will be had for private practice in midwifery, surgery, &c., in one of the largest dispensaries of the city.

Arrangements have been made for an abundant supply of means for the study of practical anatomy, and students may feel assured nothing will be wanting in this department.

A meeting of the students for the purpose of reporting cases, and for medical discussion and criticism, will be held weekly, under the superintendence of one of the instructors.

Gentlemen, previous to presenting themselves for their degrees, will be specially and minutely examined in the different branches with a view to their creditable appearance.

A regular course of instruction will be given as follows.

On Diseases of the Chest, and Midwifery, by	- - - - -	DR. BOWDITCH.
Materia Medica and Chemistry, by	- - - - -	DR. WILEY.
Theory and Practice of Medicine, by	- - - - -	DR. SHATTUCK.
Descriptive and Practical Anatomy and Surgery, by	- - - - -	DR. PARKMAN.

Rooms for study, fuel, and light, free of expense.

For terms, apply to S. PARKMAN, M.D., 7 West street.

O. 13—eoptf

H. I. BOWDITCH,
H. G. WILEY,

G. C. SHATTUCK, JR.
S. PARKMAN.

MEDICAL INSTRUCTION.

THE subscriber, Physician and Surgeon to the Marine Hospital, Chelsea, will receive pupils and give personal instruction in the various branches of medical science. He will devote to them such time, and afford them such opportunities and facilities for study and practice, as are essential for a thorough and practical medical education. The medical and surgical practice of the Hospital will be constantly open to his students, and clinical instruction, on the cases as they occur, will be given. Abundant facilities for obtaining a correct knowledge of materia medica and the dispensing of medicines will be afforded.—For terms, and more particular information, application can be made at the Hospital or by letter.

Chelsea, September, 1841.

Sep. 8—eoptf.

HOMOEOPATHIC BOOKS AND MEDICINE CHESTS.

OTIS CLAPP, No. 10 School street, Boston, has for sale, Currie's Practice of Homoeopathy; Everest on do.; Broacke on do.; Dunsford's Practical Advantages of do.; Dunsford's do. Remedies; Quin's Pharmacopoeia; Simpson's do.; Hahnemann's Organon; Jeane's do. Practice; Jahr's Manual; Hering's do., or Domestic Physician; Rouff's Repertory; Currie's Domestic do.; Broacke's Diseases of the Alimentary Canal, and Constipation, with notes by Dr. Humphrey. Also small works for popular use by Croserio, Eustaphieve, Everest, Green, Herring, Des Guis, &c. Medicine Chests for sale as above. O. C. is agent for the Homoeopathic Examiner, by A. Gerard Hall, published monthly in New York. My 12—

ABDOMINAL SUPPORTERS.

DR. HAYNES'S instrument, which is recommended by the profession generally, may now be had at the Medical Journal office. Price, with perineal strap, only \$4—without, \$3.50. By addressing the publisher, No. 184 Washington street, physicians may be readily accommodated. A. 19

The Supporters may also be obtained of the following agents:—In New Hampshire, Drs J. A. Dana, N. Hampton; A. Harris, Colebrook; M. Parker, Acworth; J. Crosby, Meredith; E. Bartlett, Haverhill; D. Crosby, Hanover; F. P. Fitch, Amherst; J. Smith, Dover; J. C. Eastman, Hamstead; C. B. Hamilton, Lyme; Stickney & Dexter, Lancaster; J. B. Abbott, Boscawen; N. Kendall & Co., Nashua. In Vermont, Dr. L. Jewett, St. Johnsbury. L. S. Bartlett, Lowell, Mass. J. Balch, Jr., Providence, R. I.

THE BOSTON MEDICAL AND SURGICAL JOURNAL is published every Wednesday, by D. CLAPP, JR., at 184 Washington St., corner of Franklin St., to whom all communications must be addressed, post paid. It is also published in Monthly Parts, with a printed cover. There are two volumes each year. J. V. C. SMITH, M.D., Editor. Price \$3.00 a year in advance, \$3.50 after three months, or \$4.00 if not paid within the year. Two copies to the same address, for \$5.00 a year, in advance. Orders from a distance must be accompanied by payment in advance or satisfactory reference. Postage the same as for a newspaper.